

Clypeasteroid echinoids of the Indian Subcontinent

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Clypeasteroid echinoids are common members of shallow benthic habitats in late Eocene to modern echinoid faunas of the tropical and warm temperate zones. Due to their high fossilization potential, they have an exceptionally good fossil record and have been intensely studied in the past. From the Indian subcontinent, clypeasteroids have been recorded by Grant (1837), Duncan & Sladen (1882-86) and a number of subsequent authors. Many of these records, however, lack proper stratigraphical information and data on associated taxa.

We are currently revising the clypeasteroid taxa documented from the Indian Subcontinent based on the type material housed at the Geological Survey of India, as well as new material collected from the field by one of us (DKS). Clypeasteroid diversity is low in the Eocene, rises in the Oligocene and reaches a peak in the Early Miocene of the Indian subcontinent. From the Early Miocene onwards, clypeasteroid and echinoid diversity as a whole drops to comparatively low levels in the Pliocene. Many of the taxa reported previously from the Eocene, actually derive from Oligocene deposits records. The genus *Clypeaster*, for example, does not occur in the Indian Eocene at all, despite several previous records stating the contrary. The Eocene deposits, so far, yielded only representatives of *Echinocyamus* and the enigmatic fibulariid *Tridium*. *Clypeaster* is the most diverse of the Indian clypeasteroid genera, being represented by almost 20 species in the Indian Cenozoic. In the Miocene a second group becomes important – the astriclypeids, with forms that share characteristics of the two astriclypeid genera *Amphiope* and *Echinodiscus*.